DERWENT-ACC-NO: 1986-249168

DERWENT-WEEK: 198638

TITLE: Sintered ornamental alloy for watch cases, necklaces, etc. - comprises titanium carbide and/or tantalum carbide, 1 or more of chromium, molybdenum and chromium carbide, nickel and tungsten carbide

PATENT-ASSIGNEE: NIPPON TUNGSTEN KK[NIUB] , SUWA SEIKOSHA KK[SUWA]

PRIORITY-DATA: 1985JP-0019091 (February 2, 1985)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 61177351 A	August 9, 1986	N/A	004	N/A
JP 87054856 B	November 17, 1987	N/A	000	N/A

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
JP 61177351A	N/A	1985JP-0019091	February 2, 1985

INT-CL (IPC): C22C029/08, G04B037/22

ABSTRACTED-PUB-NO: JP 61177351A

BASIC-ABSTRACT:

The sintered alloy comprises (in wt.%) 1-5 TiC and/or TaC, 2-5 of one or more of Cr, Mo, and CR3C2, 15-19 Ni, and balance WC. The WC has an average particle size of 1.0-2.0 microns.

USE/ADVANTAGE - The alloy is used for watch cases, necklaces, and other ornamental parts, and has a hardness as high as 1100-1300 Hv, good corrosion resistance and brazing ability w.r.t. stainless steel and to Inconel.

In an example, powdered compsn. comprising (by wt.) 82% WC (average particle size 1.0-2.0 microns), 15% Ni (2.5 microns), 1% Cr (4.0 microns), 0.5 Cr3C2 (4 microns), 0.5% Mo (2.0 microns), 0.5% TiC (1.5 microns), and 0.5% TaC (1.5 microns) was mixed in wet type ball mill for 120 hrs., dried, paraffin added, compression moulded under 1.5 ton/cm2, then presintered at 800 deg.C under vacuum to remove paraffin, and sintered at 1350 deg.C for 30-60 min. in 3 x 10 power -2 to 3 x 10 power -1 Torr vacuum, and ground using diamond. The sintered alloy obtd. had a hardness of 1290 Hv, deflective strength of 220-250 kg/mm2, specific gravity of 13.63, good corrosion resistance to synthetic sweat, exhibited no cracking after brazing with Inconel, and no reaction with carbon during sintering.

CHOSEN-DRAWING: Dwg.0/2

TITLE-TERMS: SINTER ORNAMENT ALLOY WATCH CASE NECKLACE COMPRISE TITANIUM CARBIDE TANTALUM CARBIDE MORE CHROMIUM MOLYBDENUM CHROMIUM CARBIDE NICKEL TUNGSTEN CARBIDE

DERWENT-CLASS: L02 M22

CPI-CODES: L02-J01B; M22-H03F;

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